

## **ACOUSTICS2008/916**

### **How does spatial auditory perception impact how we enjoy surround sound?**

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Surround sound has become an essential element of enormously popular home entertainment systems, with consumers becoming increasingly eager to invest in high-quality audio systems. While even a cursory web search can uncover numerous criteria, standards, and blogs describing how to select and set up surround-audio equipment, architectural effects are typically ignored or, at best, treated naively.

However, architectural acoustics profoundly affect the perceptual experience of a surround-sound listener. Similarly, sound engineers, producers, and artists agonize over every aspect of soundtrack design and production, including the spatial cues embedded in a surround-sound recording, but they have no control over the acoustic environments in which consumers experience their art.

How do the acoustics of surround-listening spaces influence the perceptual experiences of the ordinary listener? Is accurate sound localization a proper, desirable, or achievable goal? Would more loudspeakers or higher fidelity improve the surround experience of a typical consumer? These issues will be discussed, taking into account basic psychophysical issues as well as disheartening truths about how ordinary consumers experience sound from their expensive home entertainment systems.